

**REGION 5**  
77 West Jackson Boulevard  
Chicago, Illinois 60604

5-140051

Project No. 02AH45 Project Name CHEESHIRE MONITORING STUDY 90101A  
AIR 2002 0068 ARRIVAL DATE: 5/15/2002 DUE DATE: 6/5/2002

Sampler  
Mike Murphy

Cooler ID 02AH451 Page 5-140051

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH45DO1	DO1	26/04/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340204 1 to 1

Bottle No. 1  
Parameter  
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH45S03	S03	26/04/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	ADDAVILLE	1	5-340206 1 to 1

Bottle No. 1  
Parameter  
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH45SO1	SO1	26/04/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340203 1 to 1

Bottle No. 1  
Parameter  
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH45SO2	SO2	26/04/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	RVHS	1	5-340205 1 to 1

Bottle No. 1  
Parameter  
PM10

**CENTRAL REGIONAL LABORATORY**  
Data Checklist

Data Set AIR 20020068 *Cheshire Monitoring Study*  
*Suspended Particles*

- ☒ Chain of Custody
- ☒ Analysis Request Form(s)\*
- ☐ Sample Tags
- ☒ Transmittal Report w/signatures of the following:
  - Analyst(s)
  - Environmental Data Coordinator

\*Analysis Request Forms provide the data user a means to connect sample numbers with sampling locations.

Prepared by: Sylvia Puffin 6-3-02  
Environmental Data Coordinator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUN 03 2002

Subject: Review of Region 5 Data for CESHIRE MONITORING STUDY

From: Edgar Santiago, Chemist *FAA for ES*  
Region 5 Central Regional Laboratory

To:

Attached are the results for: CESHIRE MONITORING STUDY

CRL data set number: 20020068

Samples analyzed for: **Suspended Particles**

Results are reported for sample designations: 2002AH45D01, 2002AH45S01, 2002AH45S02, and 2002AH45S03.



JUN 0 3/ 2002

Data Management Coordinator and Date Received

Date Transmitted: JUN 0 3 2002  
/ /

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

/ /  
Received by and Date

Comments:

Rev. 7/23/01

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
<b>B</b>	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
<b>J</b>	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
<b>M</b>	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL <u>M</u> ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is <u>estimated</u> since it falls below the lowest calibration standard in the calibration curve.
<b>N</b>	This flag applies to GC/MS <u>T</u> entatively Identified Compounds (TICs) that have a mass spectral library match.
<b>Q</b>	This flag applies to analyte data that are severely estimated due to quality control and/or <u>Q</u> uantitation problems, but are confirmed to be qualitatively present in the sample. <u>No value is reported with this qualification flag.</u>
<b>R</b>	This flag applies to analyte data that are <u>R</u> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
<b>U</b>	This flag is used when the analyte was analyzed for but <u>U</u> ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

03/07/01

ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
CENTRAL REGIONAL LABORATORY  
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION SAMPLING DATE: 04/26/2002 LAB ARRIVAL DATE: 05/15/2002 DUE DATE: 06/05/2002  
DU NUMBER: 90101A DATA SET NUMBER: 20020068 STUDY: CHESHIRE MONITORING STUDY PRIORITY: 1 LABORATORY :CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDED PARTICLE (g/filter)			
1	2002AH45D01	GUIDING HANDS SCHOOL	0.0322			
2	2002AH45S01	GUIDING HANDS SCHOOL	0.0306			
3	2002AH45S02	RVHS	0.0343			
4	2002AH45S03	ADDAVILLE	0.0303			
DATE OF ANALYSIS			05/21- 22/2002			
ANALYST			E.S			

Reviewed by: FAA Date: 5/31/02

CRL SOP: HK015	Date: 07 January 2000	Revision No: 1
Data review for the Analytical and Inorganic Group		Page 1 of 1

# ATTACHMENT II

## CRL Analytical and Inorganics Data Review Checklist

Batch Number: 20020068 Facility: CHESTER MONITORING  
 Parameter: PM10 CRL.SOP: AIG 047

Package Overview:	YES	NO
Raw Data Package Complete?	✓	
Results Reported Correctly?	✓	
Special Requests Done?	N/A	
Calculations Checked?	✓	
Calibration Not Exceeded?	N/A	
Manual Peak Integration performed? Circle one IC or GC and Check	N/A	
Field QC Checked?	N/A	
Quality Control:		
Holding Times Met?	N/A	
Preservation Checked?	N/A	
Proper Digestion Verified?	N/A	
Initial Instrument Performance Checks Verified?	✓	
Calibration Verification Checked?	N/A	
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	N/A	
Matrix QC Checked?	N/A	
Digestion Blanks Checked?	N/A	
Spiked Blank Checked?	N/A	
LCS (if applicable) Checked?	N/A	
QCS (if applicable) Checked?	N/A	
Final Check		
Technical Review Done?	✓	
Narrative Complete?	✓	

Analyst: E.S. Peer Reviewer: FAA

Date: 5/22/02 Date: 5/31/02

Comments Attached? (Y/N) N

Data Set Number:	20020068	Parameter:	Suspended Particles
Facility Name:	CHESHIRE MONITORING STUDY		
Study Name:	CHESHIRE MONITORING STUDY		
Date of Narrative:	05/22/2002	Analyst:	ES
		Signature:	E.S.

### ANALYSIS CASE NARRATIVE

Four (4) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on May 15, 2002. Those filters were fractions of clean filters, prepared at the CRL and sent to the field for exposure. Filter identification numbers and other pertinent information obtained from the individual filters and packaging envelopes are presented in the table below.

Filters ID	Samples ID	Tag Number
Q6279986	2002AH45D01	5-340204
Q6279987	2002AH45S01	5-340203
Q6279982	2002AH45S02	5-340205
Q6279983	2002AH45S03	5-340206

Filter equilibrations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters began on 05/21/2002 and was completed on 05/22/2002. All exposed filters were in good conditions. No sampler sn number was provided for filters Q6279982 and Q6279983 (CRL sample I.D number 2002AH45S02 and 2002AH45S03).

### QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

### SAMPLE RESULTS:

All the sample results are acceptable for use.

### ELECTRONIC DATA:

No electronic data.

# CHESHIRE AIR MONITORING PROJECT

## PM10

Parameter: Suspended Particles

Data Set Numbers: 20020066- 20020070

Date of Analysis 05/21-22/2002

Analyst: ES

### BALANCE VERIFICATION:

Standard Weights	Balanced weight	Differences
Actual (g)	Balanced (g)	(g)
Limit +/-0.0005 g		
1.0000	1.0000	0.0000
2.0000	2.0001	-0.0001
5.0000	4.9999	0.0001

### QC-SUMMARY FOR EXPOSED FILTERS

Filter ID	CRL Sample	Analysis	ANALYST	Exposed
Number	I.D Number	Date		weight (g)
Q6279991	2002AH47S01	05/22/02	Analyst 1	4.3634
Q6279991	2002AH47S01	05/22/02	Analyst 2	4.3638
Differences (Limit +/- 5 mg).....				-0.0004
Q6279983	2002AH45S03	05/22/02	Analyst 1	4.3910
Q6279983	2002AH45S03	05/22/02	Analyst 2	4.3914
Differences (Limit +/- 5 mg).....				-0.0004

**CHESHIRE AIR MONITORING PROJECT**  
**PM10**

Filter ID	CRL Sample	Sampling	Station	Sampler	Pstg	P1/Pa	Total	Pre Weight	Exposed	Weight	PM10
Number	I.D Number	Date	Location	SN	Avg		Volume (M^3)	of filters (g)	weight (g)	Gain	(UG/M^3)
<b>Data set Number 20020068</b>											
Q6279986	2002AH45D01	04/26/02	Guiding Hands School	3013	19.40		0.00	4.3982	4.4304	0.0322	ERR
Q6279987	2002AH45S01	04/26/02	Guiding Hands School	3012	19.60		0.00	4.3899	4.4205	0.0306	ERR
Q6279982	2002AH45S02	04/26/02	RVHS		19.40		0.00	4.3609	4.3952	0.0343	ERR
Q6279983	2002AH45S03	04/26/02	Addaville		19.30		0.00	4.3607	4.3910	0.0303	ERR

## General information

## Standard weights, actual (g)

## Balanced weights, balanced (g)

General information	Standard weights, actual (g)	Balanced weights, balanced (g)
METTLER	0.5 0.1000	0.1000
AG 285	0.2000	0.2000
S/N 1120181840	0.5000	0.5000

mettler 050802	0.1000	0.0999
AG 285 KS	0.5000	0.4999
1120181846	2.0000	2.0000
	5.0000	5.0000
	10.0000	9.9999

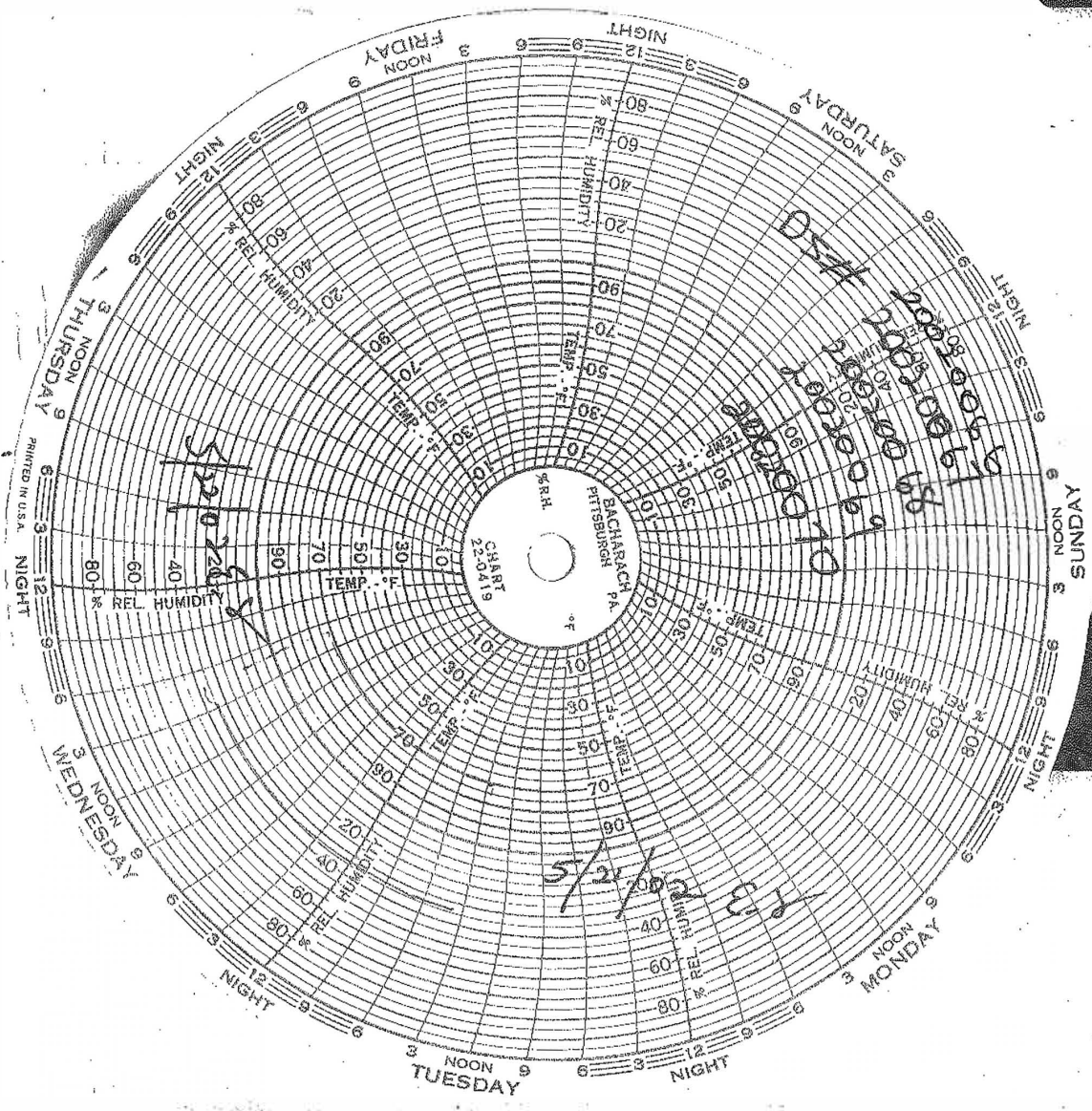
SAR TORIUS	(mg) 1500+200+200+100	1.0000	1.0000
#37010119		2.0000	2.0001
5/22/02 E.8		5.0000	4.9999



TS	FILTER I.D	TARE wt (g)	DUP wt (g)	EXPOSED wt (g)	EXPOSED wt DUP (g)	COMMENTS
	Q6280011	4.3826				
	Q6280012	4.3890				
	Q6280013	4.3380				
	Q6280014	4.3649				
	Q6280015	4.3751		4.3914		
	Q6280016	4.3537				
	Q6280017	4.3607		4.3787		
	Q6280018	4.4018		4.4190		
	Q6280019	4.3867		4.4090		
	Q6280020	4.3570		4.3842		
	<del>Q6279995</del> Q6279995	4.3364		4.3657	4.66 4.3662 mm 5/22/02	
	Q6279994	4.3793		4.4136		
	Q6279993	4.3950		4.4275		
	Q6279992	4.3634		4.3964		
	Q6279991	4.3423		4.3634	4.3638	
	Q6279990	4.3693		4.3900		
	Q6279989	4.3586		4.3915		
	Q6279988	4.3651		4.4019		
	Q6279987	4.3899		4.4205		
ET FF	Q6279986	4.3982		4.4304		
	Q6279985	4.3759		4.4050		
	Q6279984	4.3310		4.3573		
	Q6279983	4.3607		4.3910	4.3914	mm
	Q6279982	4.3609		4.3952		

IS	FILTER I.D.	TARE wt (g)	DUP wt (g)	EXPOSED wt (g)	EXPOSED wt DUP (g)	COMMENTS
1/2	Q8609578	4.3518		4.3696		
	Q8609577	4.4047				
	Q8609576	4.4045				
2	Q8609575	4.4086				
	Q8609574	4.3944				
	Q8609573	4.3820				
	Q8609572	4.3980	419102.1004 4.3983			
	Q8609571	4.4116				
	Q8609570	4.3708				
	Q8609569	4.3923				
	Q8609568	4.3413				
	Q8609567	4.3699				
	Q8609566	4.3652				
	Q8609565	4.3893				
	Q8609564	4.3782				
	Q8609563	4.3914				
	Q8609562	4.4055				
	Q8609561	4.4050				
	Q8609560	4.3683	419102.1004 4.3687			
	Q8609559	4.3343				
	Q8609558	4.3507				
	Q8609557	4.3532				
	Q8609556	4.3494				
	Q8609555	4.3580				





COMMENTS:

PM-10 ✓ AIRS                      OPERATOR OEPA DATE 4-26-02  
SITE 6454 3013 06277735  
AVG. RECORDER RESP. 19.4 TEMP            °C            K            FINAL WT            g  
ELAPSED TIME 1440 MINUTES PRESS            mmHg INITIAL WT            g  
FLOW            m<sup>3</sup>/min TOTAL FLOW            m<sup>3</sup> SAMPLE WT            g  
STD            ACTUAL            PM-10            ug/m<sup>3</sup>

US EPA Region 5 Field Sample

4-340204-1

Parameters PM10

*AK 2002-0018*

Preservative	None	S	M	M	B	D
Sample ID	02AH45DO1	X				
Sampler	<i>Mike Murphy</i>					
Date	<i>4-26-02</i>					



US EPA Region 5 Field Sample



5-340243-1

Parameters PM10

*4-26-02*

Preservative None S M MD B D  
 Sample ID 02AH45S01 X  
 Sampler *Nick Murphy*  
 Date *4-26-02*

AIRS

M-10 ✓ OPERATOR DEPA DATE 4-26-02

SP          SITE CHS# 5616 06277787

VG. RECORDER RESP. 175 TEMP          °C          K          FINAL WT          g

LAPSED TIME 1440 MINUTES PRESS          mmHg INITIAL WT          g

LOW          m<sup>3</sup>/min TOTAL FLOW          m<sup>3</sup> SAMPLE WT          g

TD          ACTUAL          PM-10          ug/m<sup>3</sup>

COMMENTS:



PM-10 ☒

AIRS

SP ☐

SITE RUHS Q6279982

OPERATOR CEPA

DATE 4-26-02

AVG. RECORDER RESP. 1741 TEMP        °C        K FINAL WT        g

LAPSED TIME 1440 MINUTES PRESS        mmHg INITIAL WT        g

FLOW        m<sup>3</sup>/min TOTAL FLOW        m<sup>3</sup> SAMPLE WT        g

STD        ACTUAL        PM-10        µg/m<sup>3</sup>

COMMENTS:

US EPA Region 5 Field Sample

5-340205-1

Parameters PM10

AIR 2002-008

Preservative	None	S	M	MD	B	D
Sample ID	02AH45S02	X				
Sampler	<u>Mike Murphy</u>					
Date	<u>4-26-02</u>					



COMMENTS:

PM-10 ☒ AIRS  
TSP ☐ SITE Adelphi  
AVG. RECORDER RESP. 12.3 TEMP      °C      K      FINAL WT      g  
ELAPSED TIME 1440 MINUTES PRESS      mmHg INITIAL WT      g  
FLOW      m<sup>3</sup>/min TOTAL FLOW      m<sup>3</sup> SAMPLE WT      g  
STD      ACTUAL      PM-10      µg/m<sup>3</sup>

OPERATOR OGM DATE 5-27-02  
4-22-02

US EPA Region 5 Field Sample

5-340206-1

Parameters PM10

AIR 20020608

Preservative None S M MD B D  
Sample ID 02AH45S03 X  
Sampler Mike Muehl  
Date 4-26-02